

NORTHWOODS JOURNAL – NOVEMBER 2022

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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Collection of PFAS-Containing Firefighting Foam Waste Begins

<https://dnr.wisconsin.gov/newsroom/release/63701>



The Wisconsin Department of Natural Resources (DNR) celebrated the start of a [collection and disposal program for PFAS-containing firefighting foam waste](#) while at a collection event in Appleton on October 17th.

The 2021-23 biennium budget provided \$1 million to the DNR and DATCP for administration of this program. North Shore Environmental Construction, Inc., a Wisconsin-based company, will be collecting and disposing of at least 25,000 gallons of PFAS-containing firefighting foam waste from fire departments throughout Wisconsin.

"Removing PFAS-containing firefighting foam from our local fire houses is an important step in not only protecting firefighters from occupational exposure to PFAS, but also protecting our land and water from contamination during emergency fire operations," said DNR Secretary Preston D. Cole.



Under state law, use of PFAS-containing firefighting foam is prohibited except during emergency firefighting operations or during testing at a facility with measures in place to prevent discharge of the foam to the environment and sewer. Many fire departments have made the switch to PFAS-free foam alternatives and have been storing PFAS-containing foam in their fire houses because of the costs associated with disposing of the foam.

"We are grateful to be one of the first departments to host a collection visit," said Appleton Fire Chief Jeremy Hansen. "We have gathered hundreds of gallons of PFAS-containing firefighting foam for safe disposal through this program. This is one of many steps we are taking to protect our firefighters, residents and environment from PFAS exposure."

"We appreciate the Governor and legislature's investment in protecting our firefighting community and the communities they serve,"

said Fire Chief Michael Stanley of the Wisconsin State Fire Chiefs Association. "We are pleased with the enthusiasm and drive by our fire departments to support the quick and effective implementation of the \$1 million program and our partnership with the DNR and DATCP."

PFAS, or perfluoroalkyl and polyfluoroalkyl substances, are a group of human-made chemicals used in numerous products, including Class B firefighting foams used to extinguish flammable liquid fires. These chemicals do not break down easily in the environment and can cause negative health impacts in humans.



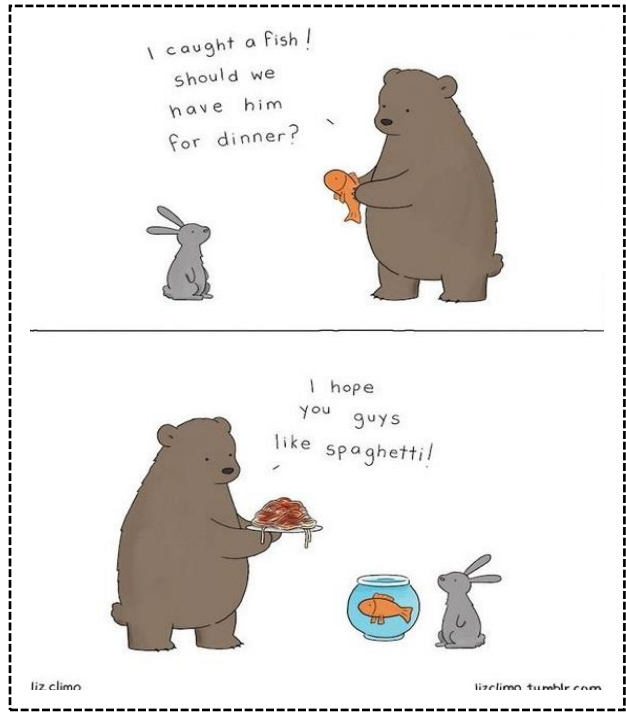
Fire departments interested in participating in the foam waste collection and disposal program may contact North Shore at info@nsecinc.com or 262-255-4468. In late 2020, the Wisconsin PFAS Action Council (WisPAC) released the [PFAS Action Plan](#), which recommended development of a PFAS-containing firefighting foam collection, disposal and replacement program. More information about PFAS-containing firefighting foam, including updates on this collection program, is available on this [DNR website](#).

New Interactive PFAS Data Tool Available

The new [PFAS Interactive Data Viewer](#) combines publicly available information from multiple sources across the DNR's website into one tool to allow users to explore what is known about PFAS in Wisconsin. Information includes locations with known contamination, PFAS-related fish and game consumption advisories and waterbodies throughout Wisconsin sampled during targeted or routine monitoring.

Data from the DNR's recent voluntary municipal drinking water system sampling program is also included. Through this program, almost 150 municipal water systems worked with the DNR to determine if PFAS is present in their drinking water. Under drinking water standards for PFOA and PFOS that went into effect in August, all drinking water systems will now be required to sample and monitor for PFAS beginning as early as next month. Data will be incorporated into this tool as it becomes available.

Visit the new interactive tool at: <https://experience.arcgis.com/experience/d4d131e169ba428384c5ac85c858bd0c>.





INVASIVE FOREST PESTS

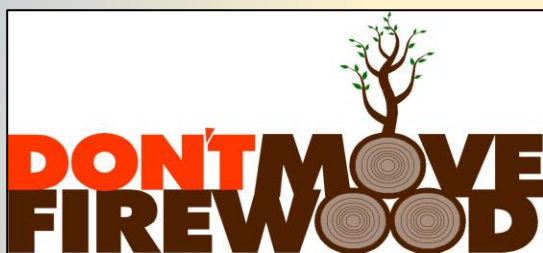
KEEP YOUR FALL TRADITIONS #INVASIVEFREE

Remember to Play ~ Clean ~ Go when you are out enjoying camping, ATVing, Hiking, hunting and whatever other nature loving activities you do. Keep those invasive pests at bay! Start a new family tradition this year and try out fall camping! You'll have fewer bugs, cooler nights, and beautiful fall foliage to enjoy!

Just remember to check your recreational vehicles (RVs) and other camping gear before you enter or leave your campsite. Particular forest pests, like Spotted Lanternfly and Spotted Moth, will lay egg masses on the tops of your vehicles and gear, which can then be transported hundreds of miles to unfested areas. Here is a helpful checklist from the USDA on where to look for Spotted Lanternfly before you leave a camping site and other outdoor areas: <https://www.aphis.usda.gov/.../fsc-slf-checklist.508.pdf>.



Emerald Ash Borer and Asian Longhorned Beetle are two other very destructive forest pests. These species burrow into trees that can then become firewood. When the firewood moves, the insects move with it and have the chance to infect other areas. Diseases like Oak Wilt and Thousand Cankers can also spread through firewood. To make sure you are not spreading invasive diseases and insects, buy your firewood within 10 miles of where you intend to burn it, and gather it on-site when allowed. And if you are buying it outside of a 10-mile radius, make sure you are only purchasing heat-treated wood, which will kill any potential insects and diseases in it.

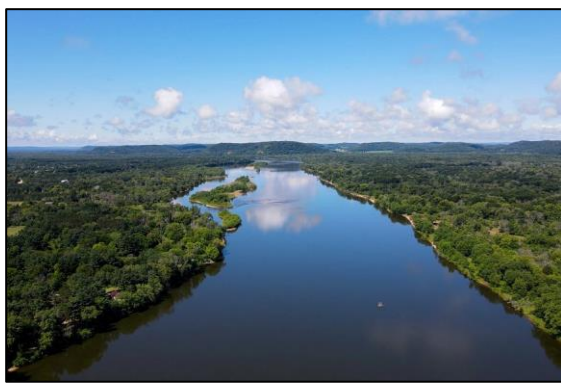


When you [#PlayCleanGo](#), you play an important role in keeping our natural areas invasive-free. Here is a great link to some fun resources kids can use to learn more about forest invasives: <https://www.dontmovefirewood.org/for-kids/>
[#DontMoveFirewood](#) [#Firewoodmonth](#)
[#hungrypests](#) [#invasivespecies](#)
[#SpottedLanternfly](#) [#spongy moth](#)
[#forestinvasives](#) [#playcleango](#) [#oakwilt](#)



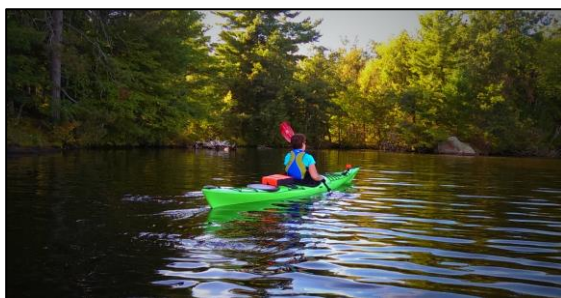
DNR Celebrates 50 Years of The Clean Water Act

<https://dnr.wisconsin.gov/newsroom/release/63731>



The Wisconsin Department of Natural Resources (DNR) is proud to celebrate the 50th anniversary of the Clean Water Act.

In 1972, growing public awareness of the importance of water quality led to sweeping amendments (passed unanimously by both houses of Congress) to the Federal Water Pollution Control Act (originally enacted in 1948). The amended law became known as the "Clean Water Act," and established a goal of making waters "fishable and swimmable."



Before passage of the Clean Water Act, open dumping of industrial wastewater and raw sewage was common across Wisconsin. Thick industrial sludges covered stretches of rivers such as the Wisconsin and the Peshtigo from shore to shore, leaving them stained black and devoid of life.

"The 50th anniversary of the Clean Water Act is a significant milestone for Wisconsin and the nation," said Adrian Stocks, Director of the DNR Water Quality Program. "This foundational environmental legislation has been central to improving and protecting the quality of our lakes, rivers, streams and wetlands, and we now welcome people who travel from around the world to enjoy Wisconsin's aquatic resources."



The Clean Water Act set nationwide standards that limited how much pollution could be discharged into our waters. The law provided municipalities and states with federal funding to upgrade wastewater treatment plants and has been expanded over time to address additional issues of concern such as industrial pretreatment, non-point pollution, toxics and biosolids.

Wisconsin acted quickly with the establishment of the Clean Water Act. Within the first two years after the law was passed, Wisconsin had established the [Wisconsin Pollutant Discharge Elimination System \(WPDES\) program](#) and

received federal approval to implement the Clean Water Act in the state on behalf of the Environmental Protection Agency (EPA). The EPA's 1974 sign-off on the WPDES program made it one of the first approved in the nation. The state's water resource protection leadership has continued over the years.

Wisconsin was the first state in the nation to require secondary treatment at wastewater treatment plants and among the first to develop statewide phosphorus criteria and thermal standards. More recently, Wisconsin has set statewide PFAS surface water criteria for PFOS and PFOA. The state has also developed innovative strategies such as water quality trading and adaptive management to address nutrient pollution from both point and non-point sources in a cost-effective manner.



While the DNR celebrates what has been accomplished over the last 50 years, the agency's work is not complete. There are still Wisconsin waterbodies that are impaired and not meeting their designated uses.

The 2022 Bipartisan Infrastructure Law (BIL) offers an opportunity likely not seen since the 1972 passage of the Clean Water Act to make exponential progress in addressing impacts on our water resources. The BIL will provide Wisconsin communities with nearly \$800 million over the next five years to upgrade infrastructure and address water quality impacts.



Read more about the Clean Water Act in Wisconsin on [the DNR's website](#), and for another story on it, visit <https://www.wpr.org/50-clean-water-act-marks-progress-clean-water-challenges-remain>.



Wisconsin has finished restoration of the Lower Menominee River, above, one of the state's five sites deemed too polluted for fish and wildlife. Environmental advocates agree many waters are healthier today, as restoration is ongoing.



Downy vs. Hairy Woodpeckers – Identification Tips

<https://www.birdsandblooms.com/birding/bird-species/medium-sized-land-birds/downy-woodpecker/> & <https://www.birdsandblooms.com/birding/bird-species/medium-sized-land-birds/hairy-woodpecker/>



One of winter's most underrated joys is watching through a kitchen window as a downy woodpecker flits from suet feeders to nearby trees. Affectionately called 'downies', these woodpeckers might easily be mistaken for a nuthatch clinging acrobatically to the side of a feeder, or a peppy chickadee, with its bold black-and-white coloring. Look for a bird slightly smaller than a robin with a white belly and back, black wings with white spots, and white facial stripes against a mostly black head.

Downies measure 6-1/2 inches long with a wingspan of 12 inches. A practiced eye can tell them apart by the size of their beaks, too. The hairy's beak is almost as long as its head, while downies' beaks are shorter, comparatively.

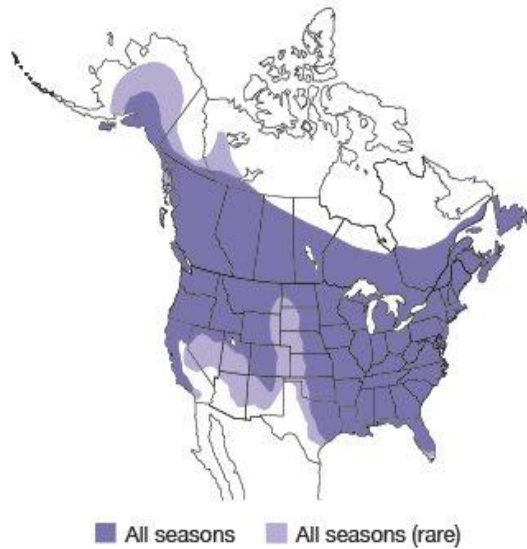


Males and females can be told apart by a red marking on the back of the male's head. Downy woodpeckers form pairs very early in the season. Courtship begins toward the end of winter. Both sexes drum on trees (and sometimes unfortunate chimneys) to claim their territory and indicate they're ready to mate. Listen for this rhythmic sound as early as January. They also call out to each other in whinnying, high-pitched notes that are accented by excited 'piks'. Once paired, the partners dig out a cavity in a dead tree for their nest or use a woodpecker nesting box. The female lays four to five white eggs.

Their diet mainly consists of insects, caterpillars, berries and nuts. Downies snack on insects that harm trees, like bark beetles and apple borers, and are drawn to feeders in many locations, both developed and rural. Hang their favorite treats, suet and peanut butter, to attract them. Kimberly suggests getting suet scraps from the butcher and hanging them in a mesh bag, along with traditional cage feeders. In warmer months when suet spoils easily, black oil sunflower seeds, millet and peanuts are suitable meals.

Like most woodpeckers, downies use their exceptionally long tongues to scavenge. "The very bristly tip of their tongues, almost like a bottle brush, impales and holds onto larvae," says Kimberly. Downies' small size also gives them another advantage over their fellow woodpeckers. They are adept at climbing up large tree trunks and branches, but they also glean bugs and grubs from weeds, grasses and thin twigs that can support their 1-ounce frames.

In winter, downies are more social, teaming up with kinglets, chickadees and nuthatches to maximize their foraging efforts. "When a mixed flock comes into their territory, they usually join it," Kimberly says. Chickadees are the sentinels of the group and are usually the first to call out a nearby predator. This dynamic allows downies to spend more time digging in through the tree bark and less time on high alert.



They reside in most of the United States and Canada, with the exception of the far north and the driest zones in the Southwest. These cheery checkered birds have expanded their ranges in the last few years, despite a changing, more urban, environment. You might see them in any open wooded area, including parks and backyards. "There has been an expansion," says Kimberly Sullivan, associate professor of biology at Utah State University. "They've done quite well in suburban areas because they visit bird feeders and don't mind open areas."



Hairy woodpeckers (male, above) have the same coloration but are larger than downies. They have spotted back and wings and white underparts. They are 9-1/4 inches long, with a 15 inch wingspan. Hairy woodpeckers are about one-third larger than downy woodpeckers, close to the size of a robin. Its chisel-shaped bill is prominent, about the same length as its head. Its coloring varies across North America, and at times it appears to be stained with brown watercolors and has less spotting. The female lacks the red patch on the back of its head.

Hairy woodpeckers nest in a cavity excavated by both sexes. The female usually lays four white eggs. Their diet mainly consists of insects, larvae of woodborers, fruit and nuts. Attract hairy woodpeckers with feeders full of suet, peanuts, peanut butter and black-oil sunflower seeds, especially in the winter. These birds prefer forests, but may move to open country in fall and winter. You can see them year-round throughout much of the United States.

For more about woodpeckers of Wisconsin, visit <https://www.wildbirdscoop.com/the-8-woodpeckers-of-wisconsin-pictures.html>.

A 'Conservation Success Story': First Great Midwest Crane Fest to Celebrate Recovery of Sandhill Cranes



Sandhill cranes are fairly easy to spot today, but they nearly vanished less than a century ago. It's their remarkable story of recovery that has inspired conservationists to plan the **first Great Midwest Crane Fest**, set for Nov. 10-12 in Baraboo. "This festival is to bring together our local community and celebrate, what we feel, is one of the great conservation stories of the Midwest," said Richard Beilfuss, CEO and president of [the International Crane Foundation](https://www.internationalcrane.org/), or ICF. Cranes are [among the oldest living bird species in the world](#), soaring through the skies for millions of years.

In 1937, renowned Wisconsin conservationist Aldo Leopold wrote one of his most famous essays, "Marshland Elegy," warning sandhill cranes could become extinct in Wisconsin and the upper Midwest. Around that time, the species had dwindled to just 25 breeding pairs in Wisconsin. Now, the Midwest is home to more than 15,000 sandhill cranes. And the eastern population has grown to about 90,000, according to Buddy Huffaker, executive director of the Aldo Leopold Foundation. "Cranes can end up being a [keystone species](#), in terms of how we think about and understand the natural world," he said. "And so as crane populations increase and become stable, that is often a reflection of good quality habitat that exists for them, sustainable and scientific hunting approaches, and that kind of connection between conservation and agriculture."

He and Beilfuss agree that the reformation of hunting laws, farmers supporting birds and the restoration of wetlands — used as breeding grounds for cranes — helped the population rebound. Fifteen crane species span five different continents, but unlike the sandhill crane, [10 of them are threatened](#), according to ICF. "There's just a few places around the world where cranes are doing really well, and one of them is right here," Beilfuss said supporting crane conservation is important because as a flagship species, building protected areas or roost sites can help lesser known or visible species.

The [Great Midwest Crane Fest](#) will feature talks about crane biology, Ho Chunk history and culture, and opportunities to enjoy a photography workshop or evening documentaries. Visitors can see the historic Leopold shack that helped launch the modern conservation movement. Participants can also see sandhill cranes out in the wild at night, but they must register in advance.



Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for "Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email anne.bartels@marinettecountywi.gov.



Fun Autumn Outdoor Activities for Kids

<https://thimbleandtwig.com/fun-autumn-outdoor-activities-for-kids/>



There is so much fun you can have with kids outdoor activities in autumn! Autumn is the perfect time for outdoor adventures with kids - it's not too hot and not too cold; there are muddy puddles for muddy puddle nature walks and golden leaves to kick and scrunch and plenty of nature crafts to make! Head out on a woodland walk to collect nature treasures and pretty leaves.

Wondering what to do outdoors with the kids when it's rainy? If you're having a rainy fall, you'll need our [Rainy Day Outdoor Activities for kids](#) But whatever the weather is doing where you are this Autumn, here's the ultimate list of **Autumn outdoor activities for kids** including Autumn nature crafts, Fall crafts, Autumn games for the garden and outdoor day trips and adventures, there's enough ideas to keep everyone busy! Why not give some of them a try this Autumn?

1. Make a Den

Making a den is a fun outdoor activity for kids. It can be a fun outdoor activity for toddlers or older children. Why not try making it a competition between kids? Who can make the best den for their teddies or toys? For older children you might want to call it a 'shelter' and give points for 'shelters' that are the most waterproof or 'best built'.



2. Play in the leaves

Crunch them, scrunch them, throw them, collect them, roll in them. – have fun with all the beautiful colored leaves this autumn! Keep reading for some ideas for [Autumn Leaf Crafts for Kids](#). It's the perfect Autumn Activity for toddlers!

3. Make an Autumn Mandala

Collect some autumn treasures and turn them into land art by making an Autumn Mandala. This is a great learning outdoor activity for kids.



4. Visit a Pumpkin Patch!

Don your wellies and head to a pumpkin patch to get yourself in an Autumnal Mood! Once you've picked your pumpkins, try carving them or even decorating them. And once they've served their purpose as a decorative item, try

making [Pumpkin Potions!](#)

5. Make a Rainbow of Leaves

You may struggle with the blue or indigo but finding a rainbow of leaves is a fun nature craft for kids. It's a great activity for preschoolers to help them learn their colors!

6. Fly Seed Helicopters

Find some seed 'helicopters' and throw them up in the air and watch them spin around and land! You can find them growing on trees like maples, ash, and basswood. Look inside pinecones for the tiny winged seeds too. Other nicknames for them include whirlygig, whirlybird and wing-nut! You can also make artwork out of the seeds in a nature collage or picture.



7. Apple Bobbing

A classic Autumn game – played by filling a tub and filling with apples. Because apples are less dense than water, they will float to the surface. Players then try to catch an apple with their teeth without using their arms. If you want to get really messy – try following this with a game of hunt the sweets in the flour! Kids will love the sticky mess!

8. Catch a Spider Web

Have you ever tried to catch a spider's web? Spiders are nature's great artists so it's super special to marvel a spider's web up close. To catch a spider's web, you need:

- Spiderweb
- Talcum powder
- Black paper
- Hair spray



What to do:

Find a spider's web by searching carefully in tall grass and bushes. Once you have found an empty web, sprinkle talcum powder all over it. The powder will help it to show up. Spray hair spray on a piece of black paper. While the spray is still wet, gently push paper up against the web so that it sticks to the paper. Spray the web on the paper with a little more hair spray to seal it!

9. Go on a Night Walk with Kids

The great thing about autumn is the nights start getting darker so you can take a fun torchlit walk without actually having to miss the kids' bedtimes! Try taking lanterns to light the way and a flask of hot mulled apple juice to warm kids up on the walk.

10. Play Glow Stick Hide and Seek

Best played on a very dark evening. Kids add some glow sticks to their hair, their clothes – wherever! Then hide and wait for people to spot their glowing sticks!

11. Go Stargazing

Stargazing is a great way to inspire young astronomers and also a lovely relaxing way to end the day! Take pillows and blankets and head to a place without much light pollution (a woods or high up on a hill is ideal) and see which constellations you can spot!

12. Autumn Leaf Lantern

Display all the Autumn leaf colors in an Autumn leaf lantern. They make a great Fall project for kids to make. Find out how we made our [Autumn Leaf Lantern](#) here. Then take your beautiful lantern on a torchlit walk.

13. Autumn leaf tealight candle holder

You just need some jars, Autumn leaves and glue (mod podge works well) and by sticking the leaves on the jam jars and adding a tea light candle - you have yourself some beautiful Autumn table decor! Or try adding a wire around the top to make a lantern.



Attention Youth Leaders & Educators - 2023 Youth Garden Grants are Open!

<https://kidsgardening.org/grant-opportunities/>

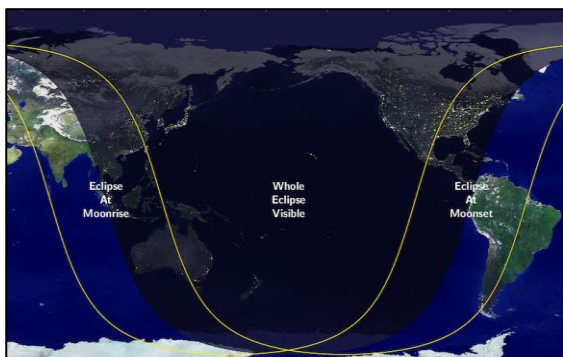


The Youth Garden Grant is open! Since 1982, the Youth Garden Grant has supported school and youth educational garden projects that enhance the quality of life for youth and their communities. In early 2023, fifty organizations will be awarded \$500 in funding and a collection of gardening supplies for their youth garden program. Application materials and support are available in both English & Spanish: <https://kidsgardening.org/grant.../youth-garden-grant-23/>.



Total Lunar Eclipse on November 8th

<https://earthsky.org/astronomy-essentials/total-lunar-eclipse-nov8-2022/>



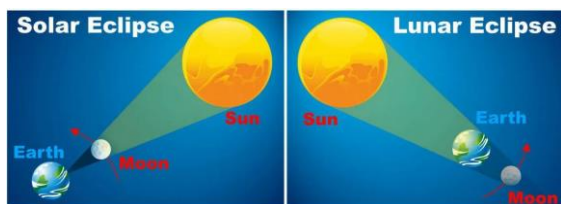
This image shows where the November 8, 2022, total lunar eclipse will be visible.

A total lunar eclipse will sweep across Asia, Australia, the Americas and the Pacific on November 8, 2022.

A lunar eclipse is caused by Earth blocking sunlight from reaching the moon and creating a shadow across the lunar surface. The sun-blocking Earth casts two shadows that fall on the moon during a lunar eclipse - the *umbra* is a full, dark shadow, and the *penumbra* is a partial outer shadow.

They can only occur during a full moon and are a popular event for skywatchers worldwide as they do not require any specialist equipment to enjoy (unlike solar eclipses).

Lunar eclipses are safe to view with the unaided eye. Binoculars and telescopes enhance the view, but aren't required. [Visit timeanddate.com](https://timeanddate.com) to get eclipse timings from your location.



Penumbral eclipse begins at 08:02 UTC on November 8 (2:02 a.m. CST).

Partial eclipse begins at 09:09 UTC on November 8 (3:09 a.m. CST).

Totality begins (the moon engulfed in Earth's shadow) begins at 10:16 UTC on November 8 (4:16 a.m. CST).

Maximum eclipse is at 10:59 UTC on November 8 (4:59 a.m. CST).

Totality ends at 11:41 UTC on November 8 (5:41 a.m. CST).

Partial eclipse ends at 12:49 UTC on November 8 (7:49 a.m. CST).

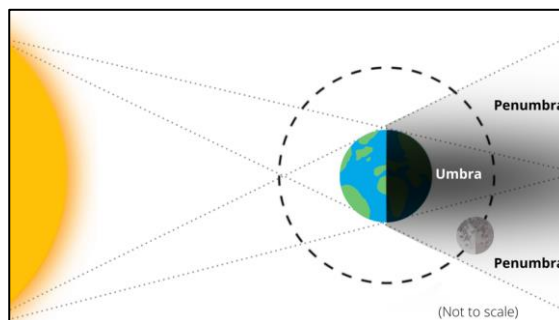
Penumbral eclipse ends at 1:56 UTC on November 8 (7:56 a.m. CST).

Duration of totality is about 85 minutes.



There are three types of lunar eclipses depending on how the sun, earth and moon are aligned at the time of the event.

- **Total lunar eclipse:** Earth's shadow is cast across the entire lunar surface.
- **Partial lunar eclipse:** During a partial lunar eclipse, only part of the moon enters Earth's shadow, which may look like it is taking a "bite" out of the lunar surface. Earth's shadow will appear dark on the side of the moon facing Earth. How much of a "bite" we see depends on how the sun, Earth and moon align, [according to NASA](https://www.nasa.gov) (opens in new tab).
- **Penumbral lunar eclipse:** The faint outer part of Earth's shadow is cast across the lunar surface. This type of eclipse is not as dramatic as the other two and can be difficult to see.



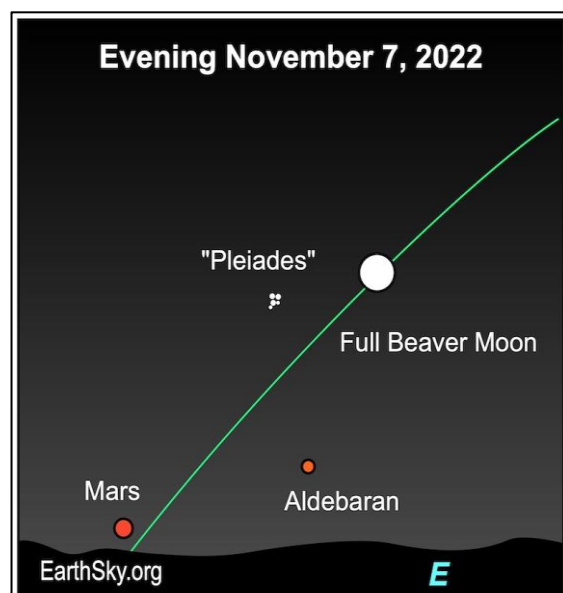
In this diagram, the moon is located in the penumbral shadow so it's experiencing a penumbral eclipse.

During a lunar eclipse the sun, earth & moon align so that earth blocks sunlight from reaching the moon and casts a shadow across the lunar surface. Whether the moon sits in the penumbra or umbra will dictate the type of lunar eclipse. During a total lunar eclipse, the umbra completely covers the lunar surface.

During a total lunar eclipse, the lunar surface turns a rusty red color, earning the nickname "[blood moon](#)". The eerie red appearance is caused by sunlight interacting with [Earth's atmosphere](#).

When sunlight reaches Earth, our atmosphere scatters and filters different wavelengths. Shorter wavelengths such as blue light are scattered outward, while longer wavelengths like red are bent — or refracted — into Earth's umbra, according to the [Natural History Museum](#) (opens in new tab). When the moon passes through Earth's umbra during a total lunar eclipse, the red light reflects off the lunar surface, giving the moon its blood-red appearance.

November 8 total lunar eclipse will be near Mars!



Fall Fire Tips

<https://www.michigan.gov/egle/newsroom/mi-environment/2022/10/21/fall-fire-tips>

Pull your boots and flannels out of the closet – it's campfire season! But be sure to brush up on our burning tips before lighting that brush pile in the backyard. DNR firefighters have responded to more than 215 fires so far this year.



Burn safely

Whenever you burn, have a shovel and water source nearby, and never leave a fire unattended. Avoid burning on a windy day when hot embers can be whisked up by the wind into dry grasses or leaves. Burning yard waste? Remember to check for a burn permit to see if conditions are safe for burning, and know your local fire ordinances. Most wildfires are started by people burning yard clippings and leaves. You'll need a burn permit anytime the ground is not covered in snow.

Burn efficiently

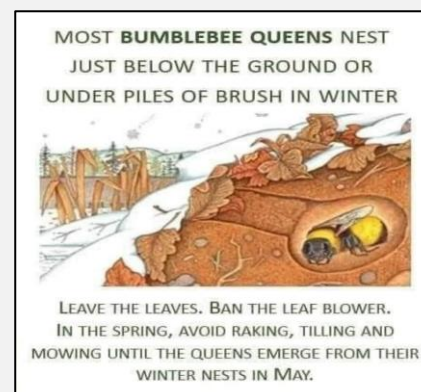
Well-dried wood is the most efficient for your wood stove or campfire, burning more cleanly and releasing less irritating smoke than poorly-seasoned wood. The [U.S. EPA's Burn Wise](#) efficiency program recommends drying cut wood in an airy, covered location for at least six months. Check your fuel using a moisture meter tool, waiting to burn until moisture content clocks in at 20% or less. Dry logs should feel light when lifted and produce a hollow sound when thumped together.

Burning of trash, plastic and hazardous materials is never allowed, and can cause health issues. [Safely recycle](#) or responsibly dispose of these materials.

Burning isn't always the best way

Many folks burn leaves and brush in the fall, but did you know you can repurpose fallen leaves? No fire required! Dead leaves are a great free mulch that will insulate perennial plants and keep garden soil from washing away in the rain. They can also be raked up into a bin or pile to turn into nutrient-rich compost. Learn how with [composting tips](#) from the Department of Environment, Great Lakes and Energy.

In addition to helping out your garden, fallen leaves serve as winter habitat for wildlife. Turtles, toads, salamanders, moths and butterflies all spend the winter snuggled under leaves. An easy way to keep your area neat and provide habitat is to rake leaves under bushes and shrubs in your yard or provide a "wild area" where leaves can break down naturally.



For more information visit <https://dnr.wisconsin.gov/topic/OpenBurnIng/BeforeYouBurn.html>.



Fun Fall Craft – Preserve Leaves with Beeswax!

<https://littlepinelearners.com/how-to-preserve-fall-leaves-with-beeswax/>



The sense of smell is closely linked with memory, probably more so than any of our other senses. This simple method of preserving leaves will fill your home with the loveliest beeswax aroma and will surely create a strong link to fun fall memories for your children.

Not only does the beeswax smell amazing, but it seals and preserve the vivid colors of those beautiful fall leaves. The preserved leaves will have a nice sheen and texture after the beeswax dries. This makes them the perfect addition to art activities or your fall nature table. You can also hang them from twine with clothespins to make a beautiful fall garland. The possibilities are endless!



Here's what you'll need:

- Leaves - Try a wide variety to see what works best for you. Choose leaves with the stems attached because this will help preserve the leaves.
- Beeswax – find it online or at specialty stores, in block or pellet form
- Small Crockpot
- Wax Paper

Step 1: Gather Leaves

Here are a few quick tips:

1. Collect freshly fallen leaves on a dry day. If they are wet, you will want to dry them between two pieces of paper towel with a heavy book on top to keep them flat. Preserve them within a day or they will start to lose color.
2. You might want to try a variety of leaves to see which type you like to work with the most.
3. Skip the crispy dry leaves or the ones that have begun to curl.



Step 2: Prepare Your Beeswax

Some people use a double boiler over the stove to melt the beeswax but this method can be inconvenient and a little dangerous, especially if children want to help, so a small crock pot works for this purpose.

Continued next page

Marinette County's Fall Color Tour a Success!

<https://www.exploremarinettecounty.com/>



The 2022 fall colors tour routes in Marinette County were a beautiful way to get out and explore by car or ATV in October. Even though November is here, there are still colors to be seen, so take some time, get out and explore before the snow flies!



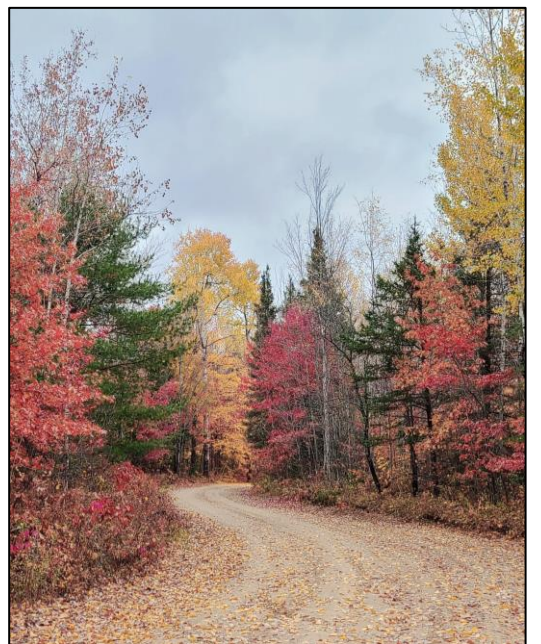
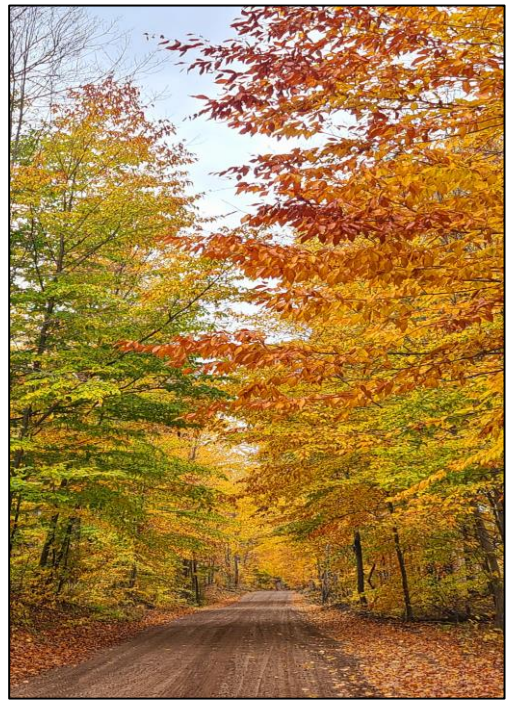
Above & below: views from the road



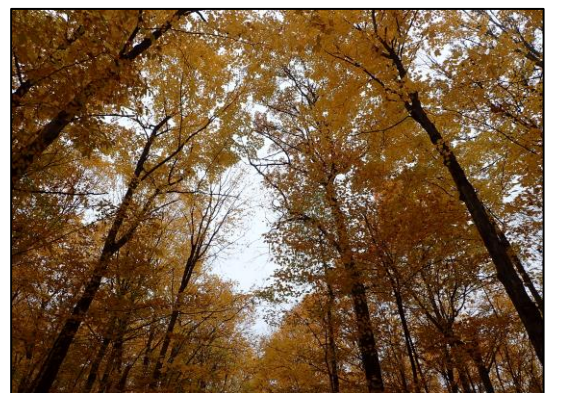
Goodman Park colors



Above: ATV/UTV route signage; below, on the trails



Above photos by Marla Sutton



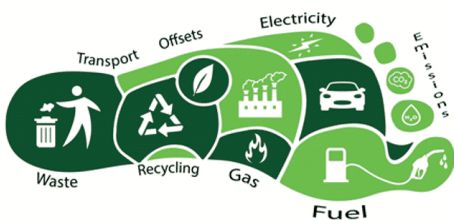
For more about County ATV/UTV trails, visit <https://www.exploremarinettecounty.com/where-to-play/activities/?category1=ATV%252FUTV%2BRiding>.



10 Steps to Help Lower Your Carbon Footprint

<https://www.washingtonpost.com/climate-solutions/2022/02/22/climate-change-actions-carbon-footprint/>

Your Carbon Footprint



Here’s the thing: small changes alone won’t save our planet. To keep the Earth from warming above the critical 2 degrees Celsius (3.6 degrees Fahrenheit) limit, climate action needs to happen at an institutional level. But that doesn’t mean you should feel helpless, or that your actions aren’t worthwhile. Taking steps to lower your own carbon footprint may help ease your climate anxiety, and even the smallest of actions will contribute to keeping our planet habitable. With that in mind, here are 10 places to start.

Create less food waste

The carbon footprint of U.S. food waste is greater than that of the airline industry. More greenhouse gas emissions come from agriculture than from several forms of transportation combined, and the environmental consequences of producing food that no one eats are massive. *The biggest proportion of food waste happens in the home.* Keep a list of food you have on hand and organize it so you can keep track. Label things with the date they were purchased or cooked. Make a system in which the oldest items go on the top shelf, so you use those items first. You can also write to local officials and vote for laws that support food recovery and prevent waste from ending up in landfills.

Ditch your grass

There are an estimated 40-50 million acres of lawn in the continental United States — that’s nearly as much as all the country’s national parks combined. According to the Environmental Protection Agency, maintaining those lawns consumes nearly 3 trillion gallons of water a year, as well as 59 million pounds of pesticides, which can seep into our land and waterways.



Transportation Department data shows that in 2020, Americans used roughly 3 billion gallons of gasoline to run lawn and garden equipment. Replacing grass with plants is among the most important ways to keep a yard eco-friendly. Laying down mulch is an easy place to start. It quickly kills grass and offers a blank canvas for planting. Convert some of your lawn into paths, rock gardens or other features. Plant native shrubs, trees, and plants local to your region for native pollinators and birds.

Save coral reefs by packing smartly for your beach vacation

Healthy marine ecosystems are essential for human well-being, and millions of people around the world rely on coral reefs for food, protection, recreation, medicine, cultural connection and economic opportunities.

So the [decline of coral reefs](#) is not just an ocean-lover’s issue — it’s also a global problem that requires collaborative action. There are plenty of ways travelers can do their part. To start, think about what you bring when you go to the beach. Skip sunscreens and toiletries that contain oxybenzone and other chemicals and opt for mineral-based products instead. Pack a reusable water bottle, utensils and bag, so you can avoid single-use plastic.

Shop sustainably by buying less

New stuff — clothes, appliances, bath products, toys, etc. — inherently comes at an environmental cost. In many situations, the “greenest” product you can buy is ... nothing. Unless your purchase represents a significant upgrade from what you already own — say, swapping out your old gas-guzzling car for an electric vehicle — you are better off trying to refurbish or repurpose existing items than acquiring more stuff. Build your own “circular economy” in your community and your home.

Protect our forests

Engaging with on-the-ground organizations as well as the policy process are a couple of ways that experts suggest individuals can encourage protection of the nation’s old-growth forests, like the [Old-Growth Forest Network](#). But there are groups that have broader forest interests, such as promoting tree-planting and other restoration initiatives, including the [Arbor Day Foundation](#) and [American Forests](#).



Trade in for an electric car

One of the most powerful individual actions people can take against climate change is to change the way they get around. As more car manufacturers start producing EVs (General Motors has even said it will *only* make EVs by 2035), the cost is expected to come down. EVs tend to have lower fuel and maintenance costs than gas-powered cars, making them cheaper over the course of their lifetimes than combustion engine vehicles, according to [recent research](#) from MIT. Your city or state might offer financial incentives to go electric. If buying an electric car isn’t feasible for you, maybe a hybrid is the next-best thing.

Weatherize your home

Weatherization comes in many forms, but the easiest is closing the cracks around windows and doors. According to the Energy Department, 25 to 30 percent of household heating and cooling is lost through windows. Identify leakage areas or drafts, repair them, and use weatherstripping to insulate windows and install a sweep to the bottom of exterior doors.



Leaves, continued

Step 3: Dip the Leaves

Hold the leaves by the stem and quickly dip the leaves in the beeswax. Make sure you completely coat the leaf, including the stem. If you would like, you can use a tweezer to submerge the leaf. If some leaves don’t have a stem, drop them in the beeswax and pick them out with a tweezer. If it curls up a bit in the beeswax, flatten it out on the wax paper.

Step 4: Gently Shake Off the Excess Beeswax

Hold the leaf up for a few seconds and let the excess beeswax drip off the leaf. You might want to give it a little shake too.

Step 5: Dry the Leaves

Let the leaves dry on the wax paper. And here’s a quick tip - pour your slightly cooled down liquid beeswax in a silicone cupcake or ice cube mold and let it harden. Once it’s a solid again, you can pop them out and save them until next year.

There are many uses for your leaves – home décor, outdoor activities, games, and more!



- <https://raisingupwildthings.com/2020/10/12/autumn-activities-to-celebrate-the-season/>
- <https://discoverwildlearning.com>
- <https://sproutingwildones.com/>
- <https://www.naturesupplyco.com/blogs/news/10-nature-inspired-fall-activities-for-your-crafty-child>

Learn about the link between climate change and racial equity

Climate scientists are clear that a just and equitable society isn’t possible on a planet that’s been destabilized by human activities. Understanding that climate change will disproportionately impact poorer or more diverse communities is an important step toward battling global warming and creating a more just world.

Consider carbon offsets

Without systemic changes in the way society functions — such as an electric grid powered completely by renewable energy or a food system that generates lower amounts of greenhouse gas emissions — it is pretty much impossible for a single person or even a large institution to go completely carbon-free. People can buy offsets for emissions from a specific activity, such as an international flight, or buy packages with names like “the green wedding carbon offset” and “balanced living bundle.”

Pass it on

Educating your peers is a great way to multiply your efforts. Share this article with your friends and family and help them take steps to make their lives a little more climate-friendly.



2023 'Keep Wildlife Wild' Poster Contest Now Open

<https://dnr.wisconsin.gov/newsroom/release/63816>

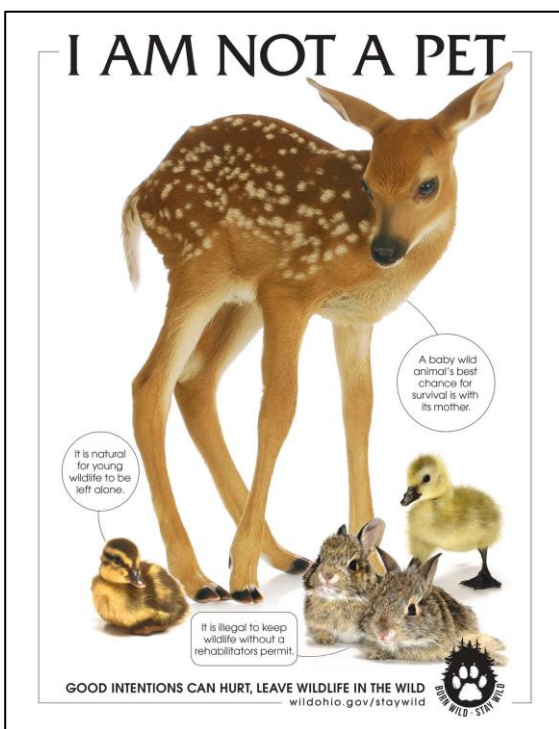


The Wisconsin Department of Natural Resources (DNR) today announced that the 2023 Keep Wildlife Wild poster contest is now open. Students in fourth, fifth and sixth grades enrolled in public, private, parochial or home schools in Wisconsin are eligible to participate.

The Keep Wildlife Wild program began in 2014 to spread the word about our shared role in keeping all wildlife healthy in its natural habitat. The contest's goal is to create a poster that teaches the importance of enjoying and observing wildlife in the wild and *not* keeping wildlife in homes or as pets.

During the warmer months of spring and summer, the frequency of human and wildlife encounters increases, especially those involving young wild animals. While most of these encounters are harmless, there are times when well-intentioned people disrupt wildlife because they mistake a lone baby animal for an orphan.

The Keep Wildlife Wild poster contest is a fun way for kids to help spread the important message to keep wildlife wild. The DNR encourages students to learn how they can help keep wild animals in Wisconsin safe and healthy by visiting the [Keep Wildlife Wild webpage](https://dnr.wisconsin.gov/keepwildlifewild).



Judging will take place in February. The judging panel will consist of DNR Keep Wildlife Wild team members and will serve without compensation to judge the entries. Those who submitted designs will be notified by email of winners in March. The DNR will also announce winners in a statewide news release and Facebook post during the sixth annual 'Keep Wildlife Wild Week' in April.



For inspiration to help design your poster and learn about Wisconsin critters, visit [EEK! Critter Corner](https://dnr.wisconsin.gov/keepwildlifewild) or check out the DNR's [Keep Wildlife Wild webpage](https://dnr.wisconsin.gov/keepwildlifewild).

Contest Deadline and Submission Options

All submissions must be received electronically via email or by mail and must include the student's entry form and artwork by **5 p.m. on Feb. 17, 2023**. Submit entries to:

Wisconsin Keep Wildlife Wild Poster Design Contest
Department of Natural Resources, Attn: Taylor Czynscon
PO Box 100 Friendship, WI 53934
Email: keepwildlifewild@wisconsin.gov

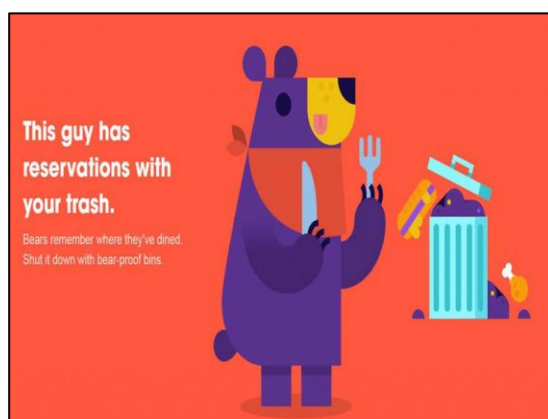


Poster Contest Rules:

- The poster entry **must contain the words:** "Keep Wildlife Wild 2023" and follow the theme of: "If you care, leave them there!"
- All posters **must consist of original artwork of Wisconsin native wildlife**. Art that shows what young wildlife experience in their first year and how wild families look are encouraged and help students understand the early life of different species.
- Posters must **fit an 8 ½" x 11"** sheet of paper.
- Posters must be **submitted individually**; No team creations.



To see the complete list of rules and requirements, please visit the DNR's [Keep Wildlife Wild 2023 Poster Design Contest webpage](https://dnr.wisconsin.gov/keepwildlifewild).



T.O.A.D. Environmental Education Programming Almost Near pre-COVID Levels

Anne Bartels, Information & Education Specialist,
Land Information Department – Land & Water Conservation Division

The number of people utilizing Teaching Outdoor Awareness & Discovery (T.O.A.D.) environmental education programs is nearly back to pre-COVID levels. On average, from 2015-2019, there were 245 programs a year and 7,700 people reached each year. Since January of this year, there have been 191 programs and about 5,500 people have participated in a TOAD program – mostly school age children, but also adult groups, retirees, and public events. Many programs are scheduled for November & December, so it's estimated to be near about 7,000 people and 240 programs by the end of 2022.

The programs are offered through the Land Information Department, and are available year-round and free of charge to Marinette County schools, groups, & organizations. Below are some photos of recent fall T.O.A.D. programs. For more information about T.O.A.D., visit <https://www.marinettecounty.com/departments/land-information/environmental-education/toad/>.



Above: learning about mammals; below, making 'sound maps' – sitting quietly and using your sense of hearing to observe sounds



Above: students visiting Harmony Arboretum's Children's Learning Garden in Peshtigo; below, students creating a 'spider' – other students have to guess what animal is being pantomimed



Rethinking Fall Cleanup for Wildlife

https://issuu.com/wisconsinnaturalresources/docs/wnr_fall_2022/s/16786286

It's fall - and time to clean out gutters, drain garden hoses, check the furnace vent, rake leaves and wash windows. Would it take too much to convince you that some of those fall chores you're accustomed to tackling this time of year are better left undone - or done differently - for the sake of our friends in nature? Especially if you could save time and money in the process? Before digging out last year's list, check out these suggestions instead.

Green that Grass

Lawns need nitrogen and other nutrients, and fall is a great time to fertilize. Instead of using chemical fertilizers, ditch the bag and leave grass clippings when you mow. According to the Soil Science Society of America, doing this can account for as much as 50% of the nitrogen your grass needs, so it reduces fertilizer use and saves money. As a general rule throughout the year, set your mower blade higher. Longer grass, 3 to 5 inches, shades the soil, preserves moisture, promotes deeper roots and prevents weeds.



If you have dense, clay soil, fall is a good time to aerate your lawn. There are lots of manual aerating tools available that can save you money and even enhance your exercise routine. Check out local tool rental outlets. Consider leaving bare patches of soil undisturbed to create habitat for pollinators like ground-nesting bees.

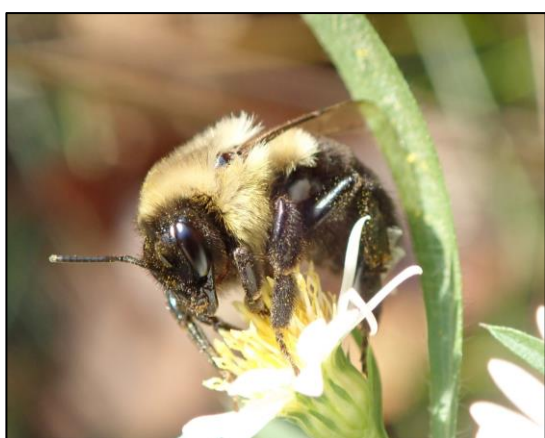
Be conservative with pesticides - use only when necessary, and only as directed. If you see some dandelions lingering, leave them alone. They're an important early food source for the rusty patched bumble bee and other pollinators before other flowers bloom next spring.

Plant Natives

It's never too early to start planning for spring. Reduce your lawn-print - and need for mowing - and take time this fall to map out some new flower beds and unmanicured lawn spaces. Trees, shrubs and plants native to Wisconsin are naturally acclimated to our climate and require less care and maintenance than nonnatives, saving you time and money.

Plant a variety of native flowers that bloom from early spring through fall, providing a food source for pollinators and birds. The DNR's Natural Heritage Conservation program has several publications online to help you get started:

<https://dnr.wisconsin.gov/topic/endangeredresources/nativeplants.html>.



Bumblebee on heath aster, a fall-blooming native plant.

Native deciduous trees like oaks, cherries, willows and birches, and conifers like pines and cedars will ensure a year-round food source for birds, along with shrubs like viburnums, dogwoods and serviceberry. Plants like columbine, milkweed, cardinal flower, bee balm, aster, goldenrod, maidenhair fern, little bluestem and Indiangrass are just a few of the many natives that will provide food and habitat for birds and pollinators in all the seasons.

Leave the Leaves

Leaves provide natural winter protection for butterflies, moths, bumble bees and a variety of other beneficial critters like snails, beetles, millipedes and spiders. If you have an abundance of leaves, rake them to the edges of your property or around trees, shrubs, vegetables and flower beds to suppress weeds and insulate roots from the cold. Put the surplus in your compost pile or donate to neighbors who compost.



Urban homeowners should take care to keep leaves out of streets and gutters. Studies show that, on average, 43% of the annual phosphorous load in urban stormwater is discharged in the fall, largely from leaf accumulation on streets. Phosphorous is a key element in the eutrophication of lakes and streams.

Don't burn leaves and brush; leaf burning is a fire hazard, a nuisance to neighbors and pollutes the air. Even if it's legal in your community, try starting a compost bin instead. Check out the DNR's website for tips on home composting:

<https://dnr.wisconsin.gov/topic/Recycling/Compost.html>.

Heed a word of caution about jumping worms in your compost. These invasive worms produce a grainy, coffee-ground like soil and disrupt the ecological balance of forests. Their tiny cocoons are easily spread in soil and mulch, so keep an eye out for worms while doing fall cleanup. Check out DNR's jumping worm page for information about how to remove them from your yard: <https://dnr.wisconsin.gov/topic/Invasives/fact/jumpingWorm.html>.

Stem that Urge to Clean

You may have been taught that once perennials are done blooming in the fall, they should be cut back to the ground and flower beds cleaned up to be spic and span. Rather than clearing away remnants of perennials, leave them standing over winter. Late-



flowering plants provide seeds for birds, and hollow-stemmed plants provide homes for some bee species that hibernate in them over winter. For rain gardens, fall is a good time to ensure that downspouts and conduits are clear of leaves to allow for proper flow.

Make Some Brush Piles

Mixed piles of brush, leaves and other plant material provide wonderful habitat for small animals, birds and insects, including bumble bees. If you think they're an eyesore, consider hiding one behind a fence or out of sight in the backyard. Or release your artistic creativity and use them as focal points by adding unusually shaped logs, native plants or bee boxes. For ideas, see the Xerces Society's ideas for "Nesting and Overwintering Habitat for Pollinators and Other Beneficial Insects": <https://xerces.org/sites/default/files/publications/18-014.pdf>.



Feed the Birds

Give bird feeders a good cleaning with soapy water and a 10% bleach solution and continue every two weeks throughout the feeding season. Place cone - or dome-shaped baffles above hanging feeders or below pole-mounted feeders to deter squirrels. Place feeders closer than 3 feet or beyond 30 feet from windows to minimize collisions. Stock up on bird seed, like black oil sunflower seed, which is high in fat and attracts the most species. Switch your summer water fountain to a heated winter water source - offer deep water for drinking and not shallow water for bathing.

Maintain Bat Houses

This is a chore for late fall, as you want to be sure your bat houses are no longer occupied. Shine a light up into the box so you know no bats are present, and be sure to wear gloves and long sleeves. Here are some other tips:

- Use a stick or shim to knock out wasp nests and any buildup of guano (accumulated excrement).
- Check for gaps or holes and seal with caulk.
- If you find that woodpeckers have made holes in your bat houses, wrap tin around the top of the house.
- Replace warped baffles or deteriorating roof.
- If screening was used inside the bat house & is deteriorating, remove it completely, including staples.
- Inspect the outside of the box and add a coat of stain or paint if it is fading.
- Inspect poles for rot, especially at the bottom.

For more beneficial fall cleanup tips, visit:

- <https://metroblooms.org/help-tuck-pollinators-into-bed-for-the-winter/>
- <https://www.myjournalcourier.com/news/article/modfarmer-pollinator-nests-17497314.php>
- <https://www.nwf.org/Garden-for-Wildlife/About/Impact>
- <https://www.natureconservancy.ca/en/blog/create-a-messy-garden-for.html>



9 Foods You Should Never Feed the Birds

<https://www.birdsandblossoms.com/birding/attracting-birds/feeding-birds/can-birds-eat-bread/>



When you see small, sweet creatures hopping along, it seems so harmless to draw them in with whatever snacks you have available. *Though the urge is fierce to feed birds bread and other convenience foods, try to resist.* Dishes people consume, like bread, are generally bad for birds in the same way that junk food is bad for our systems.

“Malnutrition is certainly a risk if birds aren’t getting the food that they need,” says John Rowden, senior director for bird-friendly communities at Audubon. “They can be undernourished, which makes them more susceptible to disease, so it could cause health or lethal consequences.” With that knowledge, here’s a list of nine nibbles to avoid feeding your feathered friends.

Bread

People often ask if birds can eat bread and if bread is bad for birds. Because bread causes birds to become full quickly, fliers may skip foods with actual nutritional value. Birding experts Kenn and Kimberly Kaufman say, “We discourage people from feeding bread to birds, as there are far too many potential risks. If moldy, bread can be dangerous to birds. Bread gets moldy quickly, and mold can pose a number of health problems for birds. If the chunks of bread are too large, they can actually block the digestive tract. Bread is also more likely to attract raccoons, rats and other unwelcome guests.”

The Kaufmans add, “A regular diet of bread products fed to waterfowl can cause serious harm. So if birds consume bread on a regular basis, the lack of nutrients causes vitamin deficiencies that lead to serious, even fatal health issues.”



Raw Meat

It might seem like a good idea to set out raw meat as a winter treat, but it can go rancid and spoil - and attract unwanted guests. “As soon as you put raw meat out it starts to transform because it’s outside of a refrigerated environment,” John says.

Seeds and Nuts Sold for People

Sunflower seeds, nuts and legumes made for humans often have large amounts of salt. Make sure you buy sunflower seeds or peanuts produced specifically for

birds, leaving out the extra sodium. Or instead of shopping for bird seed, save time and money by growing native plants that produce fruit, seeds and nectar. Favorites include crabapple trees, sunflowers and salvia.

Bacon Fat

Avoid using bacon drippings to make suet. This fat is very salty, has additives and spoils easily. The Kaufmans say, “we know it seems as if bacon grease should be OK, since it’s animal fat just like beef suet. But the chemical preservatives in commercial bacon contain carcinogenic compounds that are harmful to birds. These preservatives become more concentrated once cooked. While this doesn’t pose a health threat to humans, it can be harmful to birds.” To make suet, get high-quality beef fat straight from the butcher, before it gets processed. Lard is a safe alternative to rendered beef suet.



Potato Chips

While this popular snack is often a staple at outdoor gatherings, just like when birds eat bread, it doesn’t provide proper nutrition. Keep these salty snacks for the people at your next picnic.

Honey

You’d think birds could use the calories and sugar, but honey can grow mold in addition to becoming troublesome and sticky.

Red Food Coloring

There’s no need to add any food coloring (or any of these ingredients) to your hummingbird sugar water. The dye is harmful and won’t attract more birds. Never feed hummingbirds anything but a mix of four parts water to one part sugar.

Old Birdseed

Serve fresh seed to ensure your backyard friends aren’t exposed to moldy or rancid food.

Pet Food

Dog and cat food lacks nutrition for birds and may attract mice, rats, raccoons or other backyard pests.



Build a Pumpkin Bird Feeder

<https://www.massaudubon.org/learn/families-with-children/young-explorers/activity-sheets/pumpkins-activity-page/pumpkin-bird-feeder-instructions>



A carved pumpkin makes a great bird feeder! These step-by-step instructions will show you how to build your very own pumpkin bird feeder.

Materials

- One leftover pumpkin
- Wooden barbeque skewers
- Garden twine
- Birdseed

Instructions

1. Cut a pumpkin into the shape of a shallow bowl.
2. Stick three or four barbeque skewers through the pumpkin shell. The skewers should go through as much pumpkin flesh as possible so they don’t wiggle. Leave one or two inches of one end of each skewer sticking out of the pumpkin.
3. Tie a piece of twine to each one of the skewers. Take the opposite ends of the twine and tie them together to make a hanger.
4. Hang the pumpkin birdfeeder outside. Put one or two handfuls of birdseed inside the bowl.
5. Watch the feeder to see who comes to visit!
6. When the bowl is empty, or after three or four days have passed, toss what’s left of your birdfeeder into the compost.



For more ideas on how to use your leftover Halloween pumpkins, visit <https://blog.nwf.org/2014/10/how-to-recycle-halloween-pumpkins-for-wildlife/>



Exposure to 'Blue Spaces' Has Life-Long Benefits for Children

<https://www.treehugger.com/exposure-blue-spaces-benefits-children-6754365>

Summer afternoons at the beach, fall hikes along the edge of lakes, winter days skating on a frozen pond - these hours spent engaging with or near "blue spaces" have a profound effect on children and can lead to a greater sense of well-being in adulthood.

Blue spaces are outdoor environments, either natural or manmade, that feature water prominently and are easily accessible to people. They can be anything from an ocean coastline, river, or lake, to a town pond, a harbor, or even a fountain. They are the aquatic equivalent of green spaces, a subset of the broader concept of nature - and they matter a great deal, according to a new study from the University of Exeter.



The study, published in the Journal of Environmental Psychology, drew on data from 15,000 people in 18 countries around the world (14 in Europe, plus Hong Kong, Canada, Australia, and California). People were asked to recall their childhood exposure to blue spaces. According to a press release, they were asked "how local [the blue spaces] were, how often they visited them, and how comfortable their parents/guardians were with them playing in these settings, as well as more recent contact with green and blue spaces over the last four weeks, and mental health over the last two weeks."



The researchers found that adults who recalled more time spent near blue spaces had an ongoing yearning for natural settings in general and tended to visit them more frequently—which in turn boosted their mental well-being in adulthood.

Treehugger reported on this a couple years ago, interviewing Mark Nieuwenhuijsen, director of Air Pollution and Urban Environment at ISGlobal, who conducted research on how beach walks improve mental health and mood. He said, "We saw a significant improvement in the participants' well-being and mood immediately after they went for a walk in the blue space, compared with walking in an urban environment or resting."

This latest finding is interesting for parents to know, as they decide how to spend time with their children and what to prioritize. This study suggests that setting time aside to visit blue

spaces is wise, that it can be a useful tool in the general "parenting toolbox" of trying to raise healthy, happy humans. Unfortunately, fear is often associated with these spaces, as they can be dangerous if a child (or parent) does not know how to swim. But this fear should be conquered, rather than allowed to become an obstacle.



Dr. Leanne Martin, one of the study co-authors, said that parents are right to be cautious around water, but that "supporting children to feel comfortable in these settings and developing skills such as swimming at an early age can have previously unrecognized life-long benefits." Most interactions with blue spaces do not involve getting wet, however, and there are many advantages just to being near water, not necessarily in it.



Lead study author Valeria Vitale pointed out that these findings matter more than ever in a digital era. "In the context of an increasingly technological and industrialized world, it's important to understand how childhood nature experiences relate to well-being in later life."

Ongoing exposure to nature - and the inevitable attachment that will form - is crucial for raising future defenders of the natural world, people who realize the value of blue spaces (and other natural spaces) and feel compelled to advocate for their preservation. Unless children are given opportunities to forge those connections, it will be difficult for them to do so as adults, since they won't know what they're missing.



If you're having a hard day at home, a walk to the nearby lake or town pond offers inevitable respite. It distracts and delights kids, as there is much to observe and do. You'll come away from it with lifted spirits, so it's not hard to believe the researchers when they say that "building familiarity" with blue spaces "may stimulate joy."

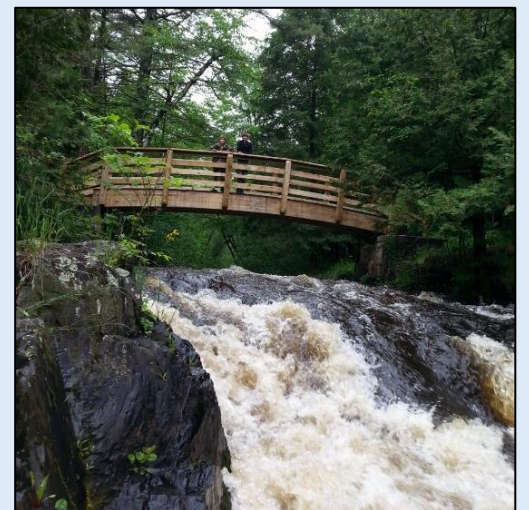
Visit Marinette County Waterfalls to Experience 'Blue Spaces' Together

<https://www.marinettecounty.com/departments/parks/outdoor-recreation/waterfalls/>

Marinette County is the Waterfalls Capital of Wisconsin! Our 15 waterfalls offer short and long hikes in serene and natural settings. Our self-guided Waterfalls Tour provides a fun, family-friendly way to get back to nature. Consider taking along a picnic basket and take a leisurely lunch alongside your favorite falls! There is nothing quite like driving down a county road and navigating to a waterfall in the outdoors of Marinette County. [Download A Waterfall Map!](#)

About half of the waterfalls on our tour are located in the Marinette County Parks system. [Waterfall/Park Day Pass](#) \$5.00 per day (per car) or [Waterfall/Park Annual Pass](#) \$25.00 per year (per car). They can be purchased at park entrances or at the link above. **Here are some of the waterfalls, but visit the website above for information about all 15 sites!**

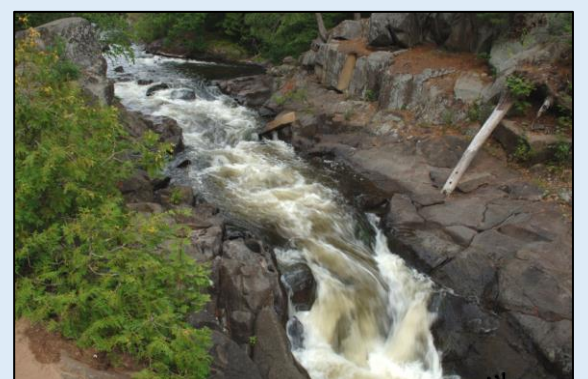
[Veteran's Falls](#) are located inside of Veteran's Memorial Park on the Thunder River. You will find a total of three falls, a walking bridge with trails and exquisite scenery and photo opportunities. This park is both a day use park and campground.



[McClintock Rapids](#) is located on the scenic Peshtigo River North of Silver Cliff in McClintock County Park. You will view a series of rapids with bridges available for exceptional viewing. There are plenty of trails to explore that intertwine with multiple bridges that weave over large and small streams and rapids of water. There are no shortages of water, streams or rapids in this park. 1.5 miles S from Falls is McClintock Campground entrance.

[Strong Falls](#) is on the Peshtigo River and is easily accessible, offers a scenic bridge, walkways, picnic area, playground, and a unique covered fire pit! These falls are located inside Goodman County Park. It is a great place for pictures with the large rock backgrounds and attractive falls.

[Dave's Falls](#) includes upper and lower falls with unique rock formations. Plenty of paths, rocks, and nature to climb through during your visit. This park offers a playground, picnic area and hand pump water.



Gov. Evers Advances Adding Green Bay Estuary to National Conservation Network

<https://www.wpr.org/evers-advances-adding-green-bay-estuary-national-conservation-network>



Gov. Tony Evers is backing an effort that would add Green Bay’s estuary to a national network of estuaries focused on conservation.

In a recent statement, Evers said he would [formally request](#) the National Oceanic and Atmospheric Administration add Green Bay to the National Estuarine Research Reserve, or NERR, System, a network of nearly 1.4 million protected acres. Becoming a member of the network would mean "more resources and attention to this critically important ecosystem," said Evers.

Estuaries are typically bodies of water where rivers connect with seas or oceans. The national network consists of 30 sites across the U.S. coastline, which includes the Great Lakes region. Its goal is to protect and study estuary systems and crucial wetlands. *Green Bay is the world’s largest freshwater estuary*, according to University of Wisconsin-Green Bay researchers, who say federal designation could enhance coordination with other estuaries.

The Governor's request effectively clears way for UW-Green Bay researchers spearheading the effort to submit a detailed request to the NOAA by late November, said Emily Tyner, the university’s director of freshwater strategy and state lead on the project.

The Lake Superior National Estuarine Research Reserve is Wisconsin’s sole member of the national network and one of two on the Great Lakes. Becoming a member of the network can take four to six years. Green Bay began its [first steps](#) in the process in 2019.

Some excerpts from the formal request (see link at top of column to see the full text):

“The Green Bay NERR will create a “living laboratory” where scientists, educators, and community partners can work and collaborate to conduct cutting-edge research, develop and offer stewardship and training opportunities, and institute regionally tailored educational programming for all ages.

The Green Bay NERR also presents an opportunity to accelerate sustainable development around our water resources, better engage Northeast Wisconsin with the incredible natural resources of the Green Bay ecosystem, and enhance the region’s economic, cultural, and recreational connections to our waters.



Peshtigo River delta marshlands

On a larger scale, the Green Bay NERR will add an invaluable partner and globally

unique resource to the NERR System, and through collaboration with coastal areas in Northeast Wisconsin, the Lake Michigan-Huron biogeographic region, and across the United States, will bring nearshore coastal expertise to the region.”

“After an extensive review process, the proposed multi-component Green Bay NERR includes the following areas: a) the Peshtigo River estuary; b) the west shore and lower bay, including the outflow of the Fox River into the bay and UW-Green Bay’s Point Sable and Wequiock Creek Natural Areas; and c) the Strawberry Creek and Big Creek estuaries in Sturgeon Bay. The proposed site is a composite of unique coastal ecosystem types representative of the Green Bay freshwater estuary and similar estuaries found within the Lake Michigan-Huron Biogeographic Great Lakes region.”



Waters of the Peshtigo River mingle in a complex system of physical and biological diversity with Lake Michigan, forming a broad estuarine ecosystem south of the City of Marinette. It represents just one among a vast number of estuaries along the Bay of Green Bay coastal regions and is currently under consideration for inclusion in a National Estuarine Research Reserve (NERR). Photo courtesy of the Eagle Herald, 4/4/21.

“Additionally, of the approximately 11,400 land acres within the proposed site, more than 8,900 acres are already designated areas managed by the Wisconsin Department of Natural Resources (DNR), including: **a. The Peshtigo Harbor State Wildlife Area, Bloch Oxbow State Natural Area, and Badger Gift Lands, which represent the farthest north extent of the NERR;** b. Peats Lake, Sensiba, Tibbet-Suamico, and Little Tail Units within the Green Bay West Shores Wildlife Area, and the Suamico River State Habitat Area, along the west shore of Green Bay; and c. The Strawberry Creek estuary in Sturgeon Bay.

The site also includes over 1,400 acres of land managed by Brown County, including the Barkhausen Waterfowl Preserve. The remaining 1,100 acres includes land owned by the Door County Land Trust, Crossroads at Big Creek, the city of Green Bay, the village of Howard, the village of Suamico, the town of Scott, the Sturgeon Bay School District, and the University of Wisconsin System.

The diversity of land-holding partners included in the site represents a unique opportunity for building a clear, coordinated force to address locally relevant ecosystem challenges while serving the mission of the NERR.”

More information about the NERR:

- <https://www.uwgb.edu/national-estuarine-research-reserves/nerr-in-the-news/> - UWGB compiled articles
- https://www.ehextra.com/news/area-seeks-growth-in-science-stewardship-education-and-economy/article_0995dffd-bfff-5116-9ac7-f33b0d561581.html

More about the NERR Program

<https://coast.noaa.gov/nerrs/>

The National Estuarine Research Reserve System is a network of 30 coastal sites designated to protect and study estuarine systems. Established through the Coastal Zone Management Act, the reserves represent a partnership program between NOAA and the coastal states. NOAA provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners.

Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea. Estuaries are home to unique plant and animal communities that have adapted to brackish water—a mixture of fresh water draining from the land and salty seawater.

The research reserves cover nearly 1.4 million acres of estuaries and are focused on the following:

- Stewardship.** Each site undertakes the initiatives needed to keep the estuary healthy.
- Research.** Reserve-based research and monitoring data are used to aid conservation and management efforts on local and national levels.
- Training.** Local and state officials are better equipped to introduce local data into the decision-making process as a result of reserve training efforts.
- Education.** Thousands of children and adults are served through hands-on laboratory and field-based experiences. School curriculums are provided online.

NERR locations throughout the country

Topics covered include nonpoint source pollution, resilient communities, habitat restoration, and invasive species.

To understand more about why estuaries are important, visit [What Is an Estuary?](#)

To learn how you can help support the research reserves, visit the [National Estuarine Research Reserve Association](#) website.



Pollinator Invitation Garden (P.I.G.) Project Updates from 2022

By Anne Bartels, Information & Education Specialist, Land Information Department – Land & Water Conservation Division

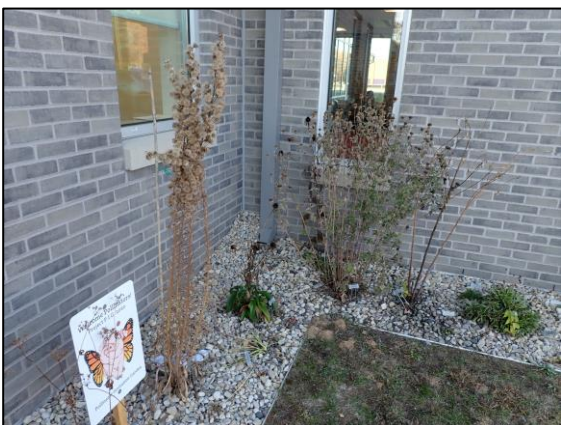
The pollinator garden project started in 2020 has wrapped up another year! This year, several new pollinator patches were installed around the City of Marinette and at the Marinette County courthouse, and several school pollinator gardens (Crivitz & Coleman Elementary, Wausaukee School District, & Peshtigo MS/HS) were visited to check progress. Other gardens at the YMCA, the Marinette REC center, UWGB-Marinette, Goodwill Possibilities, and Good Shepherd Lutheran Church (Peshtigo) were also visited for check-up visits.

In 2023, more areas around Marinette will be included in the project, as well as a plan to contact schools and organizations for potential sites.

Here are some end-of-the-season photos of area pollinator gardens, with photo dates in parentheses for reference.



Above: catnip in the newly-planted roundabout in Marinette at Hwy. 64 and 180 (10/4); below, black eyed susan at the same location (10/27).



Above: seedheads of meadow blazingstar (next to sign), purple coneflower, and wild bergamot at the Marinette REC center garden; below, Good Shepherd Lutheran Church showing little bluestem grass clusters (10/31).



Above: skipper on lavender and below, toad in the mulch at the Red Arrow Park pollinator gardens – they replaced the unused horseshoe pits (10/4).



One of the Red Arrow Park gardens (10/31).



Above: butterflyweed seed pods split open at Wausaukee School's pollinator garden; below, blanketflower and purple coneflower still in bloom at the UWGB-Marinette garden, located near the back parking lot off of W. Bay Shore Road (10/31).



For more about the P.I.G. project and before & after photos of the original project gardens from 2020, visit

<https://www.flickr.com/photos/194889855@N02/albums/72177720296237231>.

Only 6 months to springtime and planting more gardens, yay!

DNR Crayfish Case Nets First Criminal Convictions Under Wis. Invasive Species Law

The Wisconsin Department of Natural Resources (DNR) today announced the first-ever criminal convictions under the state's invasive species law, Chapter NR 40, related to the importation of live [red swamp crayfish](#).

Although red swamp crayfish are native to the southern U.S., they are not native to the northern U.S., including Wisconsin, Michigan and Minnesota.



"These crayfish are illegal in Wisconsin because they cause havoc in our waterways by out-competing other species, damaging shorelines, and burrowing deep into the ground to avoid winter freezing," said Lt. Warden Robert Stroess, DNR Administrator of Commercial Fish and Aquatic Species in Trade Enforcement. "They are prolific and resilient."

The investigation was launched in 2020 after several grocery stores were offering live red swamp crayfish for sale. Then, a walker in Ozaukee County reported an "aggressively acting" crayfish to the DNR. Lt. Warden Stroess tracked the escaped crayfish to a home 340 feet away, where a crayfish boil had taken place a few weeks earlier. Further investigation revealed a significant illegal importation of live red swamp crayfish throughout the Great Lakes region.

The crayfish distributors were sent letters informing them that the red swamp crayfish being shipped was illegal under many jurisdictions. Among those distributors was Louisiana Crawfish Company. The investigation showed that Louisiana Crawfish Company received the letter, confirmed its contents, but then continued to ship nearly 13,000 more invasive crayfish to Wisconsin.

"Try as we may, education and outreach don't always change the behavior of some individuals and companies," said Lt. Warden Stroess. "Sometimes enforcement is needed."

The Wisconsin Department of Justice charged Louisiana Crawfish Company with 15 criminal counts of intentionally transporting, possessing, or transferring invasive species. On Aug. 25, 2022, the Dane County Circuit Court accepted a guilty plea from the company. The court then convicted the company of 10 criminal counts and ordered the company to pay \$34,380 in fines, fees and assessments. The plea deal included dismissing the remaining 5 counts.

"Our hope is the outcome of this case can serve as a deterrent to other wholesale distributors to keep invasive red swamp crayfish out of Wisconsin," said Lt. Warden Stroess.

More information about [invasive species in Wisconsin](#) can be found on the DNR's website.



THE STRUGGLE TO SURVIVE ISN'T ALWAYS A FAIR FIGHT

THIS
ISSUE:

GRAY FOX VS FOX SQUIRREL

Illustrated by David Besenger

Lean, Strong, and Steady

Powerful legs help the slinky fox push and pull itself straight up a tree trunk.

Greater Grippers

Super-sharp claws on every digit help the squirrel stick to trees like a cocklebur on cotton socks.

Speedy Spacewalker

Squirrels can leap 10 feet across open space, traveling limb to limb at 20 mph.

Hooked on Climbing

The gray fox has strong, hooked claws that allow it to climb trees.

AND THE WINNER IS...

16 | XPLOR

The gray fox's special ability to climb trees doesn't beat the fox squirrel's superior stickiness and seemingly weightless speed. The squirrel escapes.

The above illustration is by artist David Besenger. He was an illustrator for the Missouri DNR for 25 years and helped create artwork for youth conservation and education. You can visit his website at <https://davidbesenger.pixels.com/> to view more wildlife artwork.

